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Report to Congressional Requesters

September 1988

CALIFORNIA CRUDE OIL

An Analysis of Posted Prices and Fair Market Value

GAO/GGD-88-114

GAO United States
General Accounting Office
Washington, D.C. 20548

General Government Division

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September 8, 1988

The Honorable John D. Dingell
Chairman, Subcommittee on Oversight
and Investigations
Committee on Energy and Commerce
House of Representatives

The Honorable Jim Bates
House of Representatives

In response to your request of March 19, 1987, we reviewed whether posted prices for crude oil in California reflect the oil's fair market value for federal windfall profit tax and royalty purposes. This report documents briefings given to you on November 13, 1987, and March 4 and 11, 1988, and provides information on

- the work of other federal agencies that have studied the issue, particularly the Internal Revenue Service in administering the windfall profit tax and the Department of the Interior's Minerals Management Service in administering federal royalties;
- the results of city, state, and federal auctions of crude oil in California to determine the extent and significance of auction prices received compared to posted prices;
- a comparison of California with the rest of the United States in terms of refined petroleum product prices and crude oil posted prices; and
- the extent of pipeline regulation in California as it affects the pricing of crude oil.

As agreed, unless you publicly announce its contents earlier, no further distribution of this report will be made until 30 days from the date of this letter. At that time, we will send copies to other interested parties.

If you have any questions about this report, please contact Larry Endy of my staff on 272-7904.

Jennie S. Stathis

Jennie S. Stathis
Associate Director

Executive Summary

Purpose

Posted prices for crude oil are important because they are generally the actual sales prices used to calculate federal windfall profit tax and royalties. Posted prices are the announced prices at which crude oil purchasers (generally major refiners) will buy oil from producers at the wellhead. If posted prices are lower than fair market value, the federal government loses tax and royalty revenues. At the request of the Chairman, Subcommittee on Oversight and Investigations, House Committee on Energy and Commerce, and Representative Jim Bates, GAO reviewed the issue of whether posted prices for crude oil in California reflect fair market value.

Background

During the 1970s, mandatory federal price controls governed the price of most domestically produced oil; these controls were fully lifted in 1981. Anticipating that the lifting of oil price controls would significantly increase oil industry profits, Congress enacted a windfall profit tax, which applied to all domestic oil produced after February 1980. Under this tax, any individual or entity owning an interest in an oil producing property paid a tax on the difference between the market price of a barrel of oil and an indexed value based on the previously controlled price under Department of Energy (DOE) regulations. Although the windfall profit tax was repealed effective August 23, 1988, the Internal Revenue Service (IRS) will continue to administer the tax and make audits of crude oil removed from producing properties before that date. Department of the Treasury officials explained that a major reason for the repeal is that revenues from this excise tax have been declining over the past few years and that this trend was expected to continue.

The federal government owns land with oil and other mineral deposit rights in California and other states. To develop these deposits, the government (lessor) may enter into a lease arrangement whereby the producing company (lessee) agrees to pay the government a fractional share (a "royalty" interest) of the minerals produced. Generally, the government receives its royalty as a monetary payment but, depending on the terms of the lease, may elect to receive its royalty as a share of the oil produced. The Minerals Management Service (MMS), under the Department of the Interior, has audit responsibility for federal offshore leases. The California State Controller has audit responsibility for federal onshore leases in the state. Royalties received from federal onshore production are shared (after deduction of windfall profit tax) with the state in which the federal lease is located.

The issue of whether crude oil posted prices reflect fair market value has been a longstanding controversy in California. Litigation initiated in 1975 by the City of Long Beach and the State of California alleging a conspiracy among major oil companies to keep posted prices artificially low in California is still ongoing.

Results in Brief

Both IRS and MMS have studied the question of whether posted prices for California crude oil reflect its fair market value and have no plans to contest the use of posted prices for tax and royalty calculations. GAO's analyses did not refute or confirm the judgments reached by IRS and MMS. Although posted prices for oil in California appear to be lower tha elsewhere, there are a number of possible explanations for this. For instance, it has been argued that the California oil market simply is different than oil markets in the rest of the United States because of its relative geographic isolation, a preponderance of low-quality oil, and limited regulation of intrastate pipelines, which are largely controlled by major oil companies.

GAO's Analysis

Other Federal Agencies' Studies of the Oil Industry and Posted Prices in California

In 1983, IRS began studying the issue of whether posted prices for California oil reflected fair market value for windfall profit tax purposes. IRS officials responsible for the windfall profit tax program told GAO that actual sales, particularly sales between unrelated parties, are the most authoritative indicator of fair market value. IRS' study found that substantial quantities of California oil were sold at posted prices among an between independent producers and major oil companies. Thus, according to these officials, IRS discontinued its study in 1987. IRS' decision wa based, in part, upon an outside consultant's (Arthur D. Little, Inc.) study, which concluded that posted prices are a proper basis for calculating windfall profit tax on California oil. GAO was not able to evaluate the consultant's study because this study contained taxpayer data to which it did not have access. (See pp. 20 and 21.)

Similarly, MMS studied underpricing allegations in 1986 and concluded that posted prices for California oil had been and should continue to be considered fair market value for federal royalty purposes. Although GAO's review raised questions about the scope and thoroughness of MMS' study, it cannot say MMS reached the wrong conclusion. The City of Lon

Beach and the State of California are currently trying to prove their allegations that major oil companies have conspired to keep posted prices artificially low in California. This antitrust issue is on appeal to the Ninth Circuit Court from a federal district court's summary judgment dismissal in 1985 after 10 years of litigation. (See p. 13.)

Oil Sell-Off Programs in California

GAO analyzed the results of oil sell-off programs in California made by the City of Long Beach, the California State Lands Commission, and DOE to determine the amounts and significance of auction prices as compared to posted prices. A sell-off program essentially is an auction or competitive bidding process involving the respective governmental entity's share of oil received as royalty or by other lease terms.

GAO's analyses showed that these auctions generally have generated selling prices with bonuses above posted prices. In such cases, these selling prices are used as the basis for calculating any applicable federal windfall profit tax and royalties. The bonuses for sell-off oil, however, do not provide a definitive basis for concluding that posted prices for all other California oil are not reflective of fair market value. For example, these bonuses are not always received because government entities sometimes accept the monetary value of their royalty shares based on posted prices rather than requesting that the royalty be paid in kind for resale purposes. In addition, representatives of the American Independent Refiners Association said government sell-off oil in California is likely to command bonuses because independent refiners have limited supply sources. For the California production areas and time periods (ranging from 1971 through 1986) that GAO studied, independent refiners purchased 100 percent of the oil auctioned by the city and state and, at times, as much as 82 percent or more of the oil auctioned by DOE. (See p. 23.)

Comparison of Refined Product Prices and Crude Oil Posted Prices

Generally, in comparing output (refined petroleum product) prices and input (crude oil) prices between geographic market areas, some relationship would be expected. GAO's analysis of pricing data indicated that refined petroleum product prices in California are generally in line with prices in the rest of the United States but that crude oil posted prices in California appear lower than elsewhere. However, such comparisons between regions may not fully consider oil quality variances that affect posted prices. (See p. 29.)

Oil Pipeline Regulation in California

Pipelines represent the lowest cost means of transporting crude oil. Intrastate oil pipeline companies in California can operate as private carriers or as common carriers regulated by the California Public Utilities Commission. Most crude oil pipelines in California are owned by major oil companies that have elected to operate as private carriers. However, companies with intrastate pipelines crossing federal lands have some common carrier obligations. GAO's review did not find any enforceable complaints regarding violations of these obligations. (See p. 35.)

The California State Lands Commission has said that the availability of common carrier pipeline transportation (open access to pipelines) for crude oil buyers and sellers in California would lead to a more competitive market for crude oil. Further, the Commission contends that a more competitive crude oil market should enhance the prospect for higher crude oil posted prices.

Recommendations

GAO is making no recommendations.

Agency Comments

GAO discussed its information with representatives from the Bureau of Land Management, DOE, IRS, and MMS, who provided technical clarifications that were incorporated.

Contents

Chapter 5
Oil Pipeline Regulation in California

Tables

Abbreviations

API	American Petroleum Institute
BLM	Bureau of Land Management
DOE	Department of Energy
DOI	Department of the Interior
EIA	Energy Information Administration
IRS	Internal Revenue Service
MMS	Minerals Management Service
PADD	Petroleum Administration for Defense District
THUMS	Texaco, Humble, Union, Mobil, and Shell

Chapter 1

Introduction

The Oil Industry in California

California has been described as a self-contained oil province with rela tively little movement of crude oil or refined products to or from areas east of the Rockies.[1] The production and refining segments of the indus try are concentrated in the hands of seven major companies—Atlantic Richfield Company; Exxon Corporation; Chevron Corporation; Mobil Oi Corporation; Shell Oil Company; Texaco, Inc.; and UNOCAL Corporatio These companies account for about 61 percent of the crude oil produc- tion and about 76 percent of the refining capacity in the state.[2] The Department of Justice's Merger Guidelines use the Herfindahl Index (a measure of concentration in a market) to divide markets into three cate gories—few, if any, competitive problems (index below 1,000); increased likelihood of competitive problems (index between 1,000 and 1,800); and highly likely that a merger will cause competitive problems (index above 1,800). In California, the Herfindahl Index for the crude o production segment of the industry is 1900; for the refining segment th index is 1750.[3]

Despite the degree of market concentration, most of the major compa- nies in California do not have sufficient internal crude oil production tc meet refinery needs. That is, the companies are net purchasers of crud oil. As such, it is in their best interests to have low posted prices for crude oil.[4]

Unlike most other states, California law does not require that intrastat pipelines be operated as common carriers. As a result, all intrastate crude oil pipelines in California except one are operated as private rather than common carriers. The California State Lands Commission has contended that major oil companies, who control most of these pipe lines, have been able to keep posted prices low in California because they own and operate their pipelines as private rather than common carriers. The Commission argues that only pipeline owners can effec- tively purchase crude oil in fields served by private carriers because these carriers require all oil to be sold to them before transport. On the

[1]See, for example, James McDonald, "A Tale of Two States -Part II," Pacific Oil World (June 1983) 10-13.

[2]California Energy Commission, Analysis of the Oil Industry Operating in Californ a (August 1988), pp. I-4 and I-6.

[3]U.S. Department of Energy, Divestiture of the Naval Petroleum Reserves (June 1987), p. 31

[4]Posted prices are the announced prices at which crude oil purchasers (generally major refiners) wi buy crude oil (of a specified quality) from specific fields. A primary characteristic used to indicate the quality of oil is its weight per unit of volume, as measured in degrees of American Petroleum Institute (API) gravity.

other hand, the Commission contends, where common carrier pipelines carry for hire crude oil they do not own, anyone can compete for the purchase of crude oil in a given field.

Most of the oil produced in California is heavy (low API gravity). For example, the average gravity of California oil is about 19 degrees API, compared to about 36 degrees API for Texas oil. Generally, posted prices in any state reflect the fact that high gravity crude oils yield more valuable refined products, such as gasoline, than do low gravity crude oils.

Posted Prices Affect Tax and Royalty Calculations

Generally, refiners' postings are the actual prices at which crude oil sells and are used to calculate federal windfall profit tax and royalties. If posted prices are lower than fair market value, the federal government loses tax and royalty revenue.

Windfall Profit Tax

During the 1970s, mandatory federal price controls governed the price of most domestically produced oil. Anticipating that the lifting of oil price controls would significantly increase oil industry profits, Congress enacted the Crude Oil Windfall Profit Tax Act of 1980 (P.L. 96-223). Generally, the tax applies to all domestic oil produced after February 1980 and was designed so that tax would be due only on sales of oil at price levels above those that existed in 1979. That is, any individual or entity owning an interest in an oil-producing property pays a tax on the difference between the free market price of a barrel of oil and an indexed value based on the previously controlled price under Department of Energy (DOE) regulations. According to Internal Revenue Service (IRS) statistics, the total reported windfall profit tax since enactment through December 1986 amounted to about $78.2 billion.[5] We were unable to determine how much of this amount was attributable to California oil production.

The windfall profit tax was repealed on August 23, 1988. Department of the Treasury officials explained that a major reason for the repeal is that revenues from this excise tax have been declining and this trend was expected to continue. According to estimates by the Treasury's Office of Tax Analysis, no tax liability is expected for fiscal year 1988.

[5]This total is a preliminary estimate (as of June 1988) made by IRS Statistics of Income Division staff.

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Federal Royalties

The federal government owns land with oil and other deposit rights in California and other states. To develop these deposits, the government (lessor) may enter into a lease arrangement in which the producing company (lessee) agrees to pay the government a fractional share (a "royalty" interest) of the minerals produced. Generally, the government receives its royalty as a monetary payment (royalty in value) but, depending on the terms of the lease, may elect to receive actual delivery of its share of the oil (royalty in kind).

Minerals Management Service's (MMS) Royalty Compliance Division has audit responsibility for federal offshore leases. The California State Controller's Division of Audits has audit responsibility for federal onshore leases in the state, as delegated by the Secretary of the Interior under section 205 of the Federal Oil and Gas Royalty Management Act of 1982.[a] Royalties received from federal onshore production are shared (after deduction of windfall profit tax) with the state in which the federal lease is located.

For calendar years 1980 through 1986, oil production from federal leases in California generated about $1.1 billion in royalty revenues. Of this amount, about $739.9 million (or 67 percent) was from offshore leases and about $359.4 million (or 33 percent) was from onshore leases.

A Longstanding Controversy: Do Posted Prices for Crude Oil in California Reflect Fair Market Value?

The issue of whether posted prices for crude oil in California represent fair market value has been a longstanding controversy.

California Legislature Reports in 1974

In February 1971, the California State Legislature established the Joint Committee on Public Domain to study the pricing of California crude oil. In 1974, the committee issued a series of fact-finding reports. These reports concluded that a free and open market did not exist in California and that the state was a victim of illegal crude oil market manipulation

[a]The California State Lands Commission has audit responsibility for royalties from state-owned lands.

by the major oil companies. They also concluded that pipelines were illegally maintained as private carriers, in a way that monopolized the movement of crude oil in California and, as such, artificially suppressed crude oil posted prices.[7] The reports did not result in any enactments by the California State Legislature.

Investigation of Oil Pipelines in 1975

In 1975, the California Public Utilities Commission began an investigation of 10 large companies operating pipelines for the transportation of crude oil or refined petroleum products within California. The purpose of this investigation was to determine the regulatory jurisdiction of the Commission in the operations of such pipelines. In order for the Commission to have regulatory jurisdiction, it would have to determine that pipelines have been dedicated to a public use. If dedicated to a public use, the pipelines would be subject to the Commission's rules for crude oil transportation, including rate regulation.

During the investigation, the Commission contended that the Atlantic Richfield Company's pipelines "have been dedicated to a public use." In 1977, the two parties entered into a "Stipulation and Agreement" in which Atlantic Richfield agreed to transfer to a subsidiary and dedicate to public use some of its crude oil pipeline facilities in California. The subsidiary (the Four Corners Pipe Line Company) was to operate the converted pipeline system as a public utility subject to regulation by the Commission.

In 1979, the Commission discontinued its investigation of all companies. The Four Corners Pipe Line Company remains today as the only intrastate crude oil pipeline network subject to Commission rules and regulations governing tariff rates and operations. The remaining pipelines are not regulated.

Law Suits Filed Against Major Oil Companies

In 1975, the State of California and the City of Long Beach filed suit in U.S. District Court, Central District of California, against seven major oil companies. The suit, sometimes referred to as Long Beach I, alleged that beginning in the early 1960s, the companies had conspired to fix the price of crude oil at levels far below those that would prevail in a competitive market. In addition to alleging that the underpricing scheme

[7] In 1975, these reports were submitted as testimony in hearings before the Subcommittee on Antitrust and Monopoly, Committee on the Judiciary, U.S. Senate (1st Session, S. 1167, The Industrial Reorganization Act, Part 9, The Energy Industry, Jan. 21, 22, and 30, 1975).

violated federal antitrust laws, the City of Long Beach alleged in this suit that the scheme violated the contract between the City and the oil companies for the production and pricing of crude oil from the Long Beach Unit of the Wilmington field.

Ten years later, in September 1985, the district court rendered a summary judgment of insufficient evidence of a conspiracy and dismissed the antitrust aspect of Long Beach I. As of May 1988, the breach of contract issue was still pending before district court, and the antitrust (conspiracy) issue was on appeal to a federal court of appeals (Ninth Circuit).

In 1986, the State of California and the City of Long Beach filed a second law suit (Long Beach II) drafted exclusively in terms of state law.[a] Covering the period 1980 through 1985, the suit alleged that the oil companies violated various state laws by using posted prices that did not reflect real market values (contract claims), refusing to operate their pipelines as common carriers (pipeline dedication claims), and conspiring to fix posted prices (antitrust claim).

The suit was originally filed in state court but later was removed to federal district court. In a May 1987 decision, the district court dismissed the contract claims, remanded to state court the pipeline dedication claims, and agreed to limited discovery proceedings for the antitrust claim. However, the judge noted that the antitrust claim was very similar to that presented in Long Beach I and, accordingly, said that the claim would be dismissed with prejudice if the discovery process revealed insufficient evidence. This decision reflects the status of Long Beach II as of May 1988, except that the plaintiffs have appealed the contract claims to the federal Ninth Circuit.

[a]Outside counsel for one of the oil companies told us that the defendant oil companies refer to the 1986 law suit as Long Beach III. The attorney explained that (1) the plaintiffs filed a second lawsuit, which the defendants call Long Beach II, in March 1986 in state court; (2) the defendants caused the case to be removed to federal district court; and (3) the plaintiffs subsequently dismissed the case in July 1985 and refiled in 1986.

Objective, Scope, and Methodology

Your joint letter requested that we review the pricing of Alaskan and California crude oil for federal windfall profit tax and royalty purposes. As agreed, we limited our review to the pricing of California oil.[9] Our objective was to review the issue of whether posted prices for crude oil in California reflect the oil's fair market value.

Since the windfall profit tax was enacted in 1980, five major oil companies have posted prices for California crude oil—Atlantic Richfield, Chevron, Mobil, Texaco, and UNOCAL.[10] We interviewed managers responsible for West Coast crude oil supplies at Chevron, Texaco, and UNOCAL. Chevron has the most refining capacity of any major oil company in California. As reported by the California Energy Commission in Analysis of the Oil Industry Operating in California (August 1986), Chevron's refineries in California accounted for 35.1 percent of the total refining capacity in the state; UNOCAL was a distant second with 9.7 percent of the state's total capacity. Texaco posted prices in California until 1962 and restarted this practice in 1984 after acquiring Getty Oil Co. UNOCAL, on the other hand, besides being second in refining capacity, has posted prices for California crude oil since at least the 1920s.

As detailed more specifically in the following sections, we developed information from other federal agencies' studies of the oil industry and posted prices in California and from our study of (1) city, state, and federal sell-off or auction programs for government oil in California; (2) refined product prices and crude oil posted prices in California compared to the rest of the United States; and (3) oil pipeline regulation in California.

Other Studies of the Oil Industry and Posted Prices in California

We interviewed officials and reviewed work in three federal agencies—Energy Information Administration (EIA), IRS, and MMS. At EIA headquarters in Washington, D.C., we interviewed the authors of an article entitled "California Crude Oil Price Levels," which was published in the April 1987 issue of EIA's Petroleum Marketing Monthly. We discussed

[9]Our earlier report discusses the pricing of Alaskan oil (Response to Questions About the Windfall Profit Tax on Alaskan North Slope Crude Oil, GAO/GGD-86-12, Dec. 10, 1984). Also, in regard to royalty revenue, Alaska has relatively little federal oil. For example, according to MMS statistics, federal leases in Alaska produced 1.53 million barrels of oil during calendar year 1986, which generated $2.72 million in federal royalties. In comparison, federal leases in California produced [illegible] million barrels of oil, which generated $94.86 million in federal royalties.

[10]These are the companies with posted prices reported in annual editions of Platt's [illegible] book and Oilmanac.

the article to ensure we understood the article's data sources and conclusions. We also provided a copy of the article to supply and distribution managers at Chevron in order to obtain a view from the industry.

We monitored the status of IRS' study of the posted price issue by periodically interviewing the Chief of IRS' Windfall Profit Tax Section. This section, although located in Dallas, Texas, is a national office component of IRS' Office of Coordinated Examinations and has nationwide responsibilities. Our discussions focused on obtaining an overview of IRS' study, which included the use of an outside consultant to analyze the pricing of California oil. We did not review the details supporting IRS' study, because, as requested, we did not seek authority to get access to tax return information.

To determine the scope of MMS' study of the posted price issue, we first interviewed the agency's Director and the Chief of the Royalty Liaison Office in Washington, D.C. For specific details, these officials referred us to Royalty Management Program officials at Lakewood, Colorado—particularly the Chief of the Royalty Valuation and Standards Division and the Chief of the Royalty Compliance Division. At Lakewood, we interviewed these officials and staff who had studied the posted price issue. We also reviewed file materials that pertained to MMS' study.

Oil Sell-Off Programs in California

To obtain a general understanding of the city, state, and federal oil sell-off programs in California, we interviewed the Director, Department of Oil Properties, City of Long Beach; the Chief Counsel, California State Lands Commission; and the Planning Officer for DOE's Office of Naval Petroleum and Oil Shale Reserves. To obtain industry perspectives on the sell-off programs, we interviewed members of the American Independent Refiners Association (West Coast Division) and crude oil supply managers at Chevron, Texaco, and UNOCAL. For various time periods ranging from 1971 through 1986 (depending on data availability), we quantified the results of the city, state, and federal sell-off programs by using (1) price and other contract data provided us by program officials and (2) field production data published by the Conservation Committee of California Oil Producers. (See tables 3.1, 3.2, and 3.3.)

Refined Product Prices and Crude Oil Posted Prices

To evaluate refined product pricing, we analyzed the prices of outputs (refined petroleum products) and inputs (selected crude oils). As an initial point of analysis, we used Platt's Oil Price Handbook and Oilmanac - 1985 to develop a comparison of average prices for refined petroleum

products in Petroleum Administration for Defense District V (PADD V) and the U.S. (excluding PADD V) during 1950 through 1985.[11] (See table 4.1.) For the input side of the comparative overview, we used data from Platt's and the American Petroleum Institute's Basic Petroleum Data Book (Vol. VII, No. 2, May 1987). We compared average posted prices in the U.S. (excluding PADD V) and California for the period 1950 through 1985. (See table 4.2.) In developing tables 4.1 and 4.2, we used the most current information available at the time of our analyses.

Next, we sought to identify California oils having physical properties similar to West Texas Sour crude oil. As noted in our earlier report,[12] West Texas Sour is the principal domestic crude oil traded on the Gulf Coast and is very comparable to Alaskan North Slope oil in physical properties, such as gravity and sulfur content. We contacted the Project Manager for Reservoir Data and Analysis at DOE's Bartlesville (Oklahoma) Project Office to obtain information from a data bank that contains 7,476 crude oil analyses, which is one of the largest collections of petroleum analyses in the world.[13] After identifying several California candidates, the Project Manager suggested that we use Ventura oil, not only because of the physical property similarities to West Texas Sour oil but also because the Ventura field, one of the 10 largest in California, produces more oil than the other fields identified. Accordingly, we compared posted prices for West Texas Sour oil and California Ventura oil (see table 4.3) and delivered prices (at Los Angeles refineries) for Alaskan North Slope oil and California Ventura oil (see table 4.4) for 1980 through 1985.

Oil Pipeline Regulation in California

We studied the extent of pipeline regulation (common carrier service) in California because the availability of transportation may affect the posted prices for crude oil. Staff counsel for the Federal Energy Regulatory Commission told us that the agency has little authority in California because most of the state's oil pipelines have only intrastate

[11] PADD V includes the states of Alaska, Arizona, California, Hawaii, Nevada, Oregon, and Washington; however, California accounts for over one-half (57.4 percent in 1985) of the sales of refined petroleum products in the district.

[12] See our report entitled Response to Questions About the Windfall Profit Tax on Alaskan North Slope Crude Oil (GAO/GGD-85-12, Dec. 10, 1984, pp. 15-16.)

[13] The data bank is described in: U.S. Department of Energy, Bartlesville Project Office Crude Oil Analysis Data Bank User's Guide (DOE/BC-87/5/SP, 2d edition, June 1987. The data bank is maintained by the National Institute for Petroleum and Energy Research, which was established in 1984 as the result of a cooperative agreement between Department of Energy and the Illinois Institute of Technology Research Institute, a not-for-profit research organization.

operations. However, the counsel added that intrastate pipeline companies holding right-of-way permits to cross federal lands may have certain common carrier obligations under the Mineral Leasing Act (30 U.S.C. 185). To determine the extent of these obligations, we reviewed applicable sections of the statute and Bureau of Land Management's (BLM) regulations and operations manuals. Also, we interviewed attorneys in the Department of the Interior's Office of the Solicitor and the Chief of BLM's Right-of-Way Division in Washington, D.C. Further, we interviewed program officials (the Deputy for Operations, the Chief of the Branch of Lands and Minerals, and the Chief of the Lands Section) at BLM's state office in Sacramento, California.

From case files in BLM's district office in Bakersfield, California, we extracted data to quantify the number of federal right-of-way permits outstanding in California (as of July 1987) and the related number of pipeline miles crossing federal lands in the state. To provide a basis for comparison, we contacted the California State Fire Marshall's Office in August 1987 to obtain the total number of intrastate pipeline miles. (See table 5.1.)

To determine whether BLM had received any complaints regarding pipeline access discrimination by any company holding a federal right-of-way permit, we interviewed the program officials mentioned earlier at BLM's headquarters in Washington, D.C., and the state office in Sacramento, California. We also discussed pipeline transportation issues with the industry representatives that we contacted during our review. Moreover, we reviewed all right-of-way permit case files at BLM's district office in Bakersfield, California—the office that administers the majority of the federal right-of-way permits issued in California—for any evidence of complaints regarding pipeline access discrimination.

We did our review during April 1987 through March 1988 in accordance with generally accepted government auditing standards. We discussed our information with representatives from BLM, DOE, IRS, and MMS, who provided technical clarifications that we incorporated.

Other Federal Agencies' Studies of the Oil Industry and Posted Prices in California

We reviewed work done by EIA, IRS, and MMS. An article in the April 1987 issue of EIA's Petroleum Marketing Monthly indicated that posted prices for crude oil in California might have been inappropriately low. In our opinion, the EIA article, industry's criticisms of the article, and our own independent analyses have methodological constraints and do not reach a definitive answer to the posted price question. IRS and MMS, the agencies responsible for windfall profit tax and royalty matters, respectively, have studied the question of whether posted prices for California crude oil reflect its fair market value. These agencies have no plans to contest the use of posted prices for tax and royalty calculations. Our work does not refute or confirm the judgments reached by IRS and MMS.

EIA Article Raises Questions About California Crude Oil Prices

The April 1987 issue of EIA's Petroleum Marketing Monthly contains an article entitled "California Crude Oil Price Levels." The publication notes that the information presented "should not be construed as advocating or necessarily reflecting any policy position of the Department of Energy or any other organization." The authors point out that the West Coast petroleum industry differs from the rest of the United States in two significant aspects. First, California crude oil prices are lower than elsewhere. Second, refiners' gross margins (i.e., the differences between refined product prices and crude oil prices) are substantially greater in California than elsewhere.

The authors examine four possible factors that, singly or in combination, may contribute to the California situation. They conclude that none of the factors is sufficient to explain why the California crude market seems to function independently of the rest of the country. For example, the authors recognize that most California oil is heavy (low gravity) and thus of poorer quality than Gulf Coast crudes; yet, even after price adjustments for quality, West Coast and Gulf Coast crudes seem to be on different price scales.

To obtain a perspective from the industry, we provided a copy of the article to the Chevron managers we contacted during our review. In an October 28, 1987, letter, the Vice President for Supply and Distribution critiqued the article. His major criticism was that the article failed to recognize competitive market factors on the West Coast, such as a limited refinery capacity to convert heavy oils into gasoline and jet fuel. Another criticism was that the EIA authors inaccurately used price adjustments for differences in oil quality. According to the Chevron representative, gravity price adjustments in crude oil posted price schedules are intended to be applied only to crude oils within the same field

and cannot validly be used to compare crude oils from different fields. We discussed these points with the EIA authors. They generally disagreed with the criticisms and were considering additional analyses to respond.

We think that the time periods (usually about 1 year) covered by analyses in the EIA article are too brief to permit drawing conclusions. At the same time, much of Chevron's response, while not without merit, is more of a general description of the California market rather than a detailed analysis. Further, even though our independent analyses covered more extended time periods (see ch. 4), we reached no definitive answer to the posted price question.

IRS Decides Not to Pursue the Posted Price Issue

In 1983, due to allegations from various sources, including the City of Long Beach and the State of California, IRS began studying the issue of whether posted prices for California oil were reflective of fair market value for windfall profit tax purposes. In 1987, IRS officials responsible for the windfall profit tax program concluded that, on the basis of findings up to that time, if IRS formally challenged posted prices for California oil, the agency would not be successful. The IRS officials did, however, leave the matter open for consideration in the event that new facts or data were discovered.

IRS' conclusion was based on several factors. The most significant of these was that IRS' study of oil sales from fields in California showed that substantial amounts of the oil were sold at posted prices among and between unrelated independent and major oil companies. According to the IRS officials, actual arm's-length sales between unrelated parties are recognized under case law and IRS' regulations and revenue rulings as the most authoritative indicator of fair market value.

Also, IRS' 1987 decision to not pursue the posted price issue was based, in part, upon a study of the pricing of California oil by an outside consultant, Arthur D. Little, Inc. The results of this study shared by IRS noted that posted prices are lower in California than elsewhere in the United States for three reasons. First, a proprietary pipeline transportation system has created a less competitive market in California. Second, costly upgrading of facilities to refine heavy oil, which is preponderant in California, has resulted in lower posted prices. Third, low posted prices for heavy oil, in turn, have tended to hold down the posted prices of all other California crude oils. Despite these reasons, the consultant's report concluded that posted prices are a proper basis for calculating

windfall profit tax on California oil because a substantial volume (generally one-third or more) of total oil production in the state was sold between unrelated parties at posted prices. We did not review this study because it was based on taxpayer information to which, at the requesters' direction, we did not seek access. We were unable to assess, therefore, IRS' conclusion about the extent of arm's-length transactions by analyzing information such as the extent to which major oil companies were willing to sell crude oil at posted prices or the extent to which independent refiners were able to satisfy their demands at these prices.

MMS Sees No Issue Regarding Posted Prices in California

In a July 2, 1986, meeting with MMS officials, California State Controller (Division of Audits) representatives alleged that crude oil produced from federal onshore leases in California was being undervalued for royalty purposes. To investigate these allegations, MMS officials went to California on July 10 and 11, 1986. They met with (1) members of the law firm representing the plaintiffs (City of Long Beach and State of California) in the antitrust law suit (Long Beach I) against major oil companies in California and (2) City of Long Beach officials responsible for the city's oil sell-off program.

In a summary of the investigation's findings dated August 8, 1986, the MMS officials noted that the court "has thus far ruled in the oil companies' favor on all counts." Later, during our review, the MMS officials emphasized this result to us. They added that the law firm had given them some data comparing refiners' margins in California and Texas. In their opinion, however, the data were merely allegations, not hard or prima facie evidence that posted prices in California were not reflective of fair market value.

In another summary of findings dated December 9, 1986, and provided to the California State Controller's Division of Audits, the MMS Associate Director for Royalty Management reported on the results of the City of Long Beach's oil sell-off program. The summary noted that the city, at times, had accepted bids below posted prices and, at other times, had accepted bids above posted prices; however, at the time of MMS' visit, the price the city was receiving for its crude oil sales was approximately the same price MMS was receiving for oil from its onshore federal leases. From this, MMS concluded that "value received for royalty purposes for Federal leases located in California satisfied the requirement of the regulations and fulfilled the obligations of DOI [Department of the Interior]."

Our discussions with the MMS staff responsible for the investigation and our review of applicable files disclosed no systematic or verifiable analyses to support the agency's position that sell-off and posted prices are similar. For this reason, we independently developed detailed information about the extent and results of oil sell-off programs in California (see ch. 3). On the basis of our evaluation of its work, we question the scope and thoroughness of MMS' study; however, our work raises no substantial evidence that the agency is wrong in concluding that posted prices should continue to be used to calculate federal royalties.

Oil Sell-Off Programs in California

We analyzed the results of auctions of crude oil (sell-off programs) in California held by the City of Long Beach, the California State Lands Commission, and DOE to determine the amounts and evaluate the significance of selling prices relative to posted prices. Our analyses showed that these programs generally have generated selling prices with bonuses above posted prices. In such cases, these selling prices are used as the basis for calculating any applicable federal windfall profit tax and royalties. While the bonuses for sell-off oil suggest the possibility that, at least at certain times, posted prices on crude oil do not reflect market value, they do not provide a definitive basis for such a conclusion. For example, government entities do not always sell their royalty share of crude oil at auction because they sometimes prefer to receive their royalty in the form of payments at posted prices. In addition, representatives of the American Independent Refiners Association told us that governmental sell-off oil in California is likely to command bonuses because independent refiners have limited supply sources. Our analyses showed that independent refiners purchased 100 percent of the oil auctioned by the city and state and as much as 82 percent or more of the oil auctioned by DOE.

Results of the City of Long Beach's Sell-Off Program

The City of Long Beach, in a capacity as trustee for the California State Lands Commission, manages Wilmington oil field production. Day-to-day operations of the Long Beach Unit in the Wilmington field are the responsibility of the field contractor, which is THUMS Long Beach Company, a consortium of Texaco, Humble (now Exxon), Union, Mobil, and Shell. Under the terms of the Long Beach Unit Contractors' Agreement (entered into in 1965 by the City of Long Beach, the field contractor, and several nonoperating contractors), 12-1/2 percent of a certain share of Long Beach Unit production is offered for sale by competitive bidding. This sell-off program is managed by the City of Long Beach's Department of Oil Properties.

As table 3.1 shows, the volume of sell-off oil from Tract One in the Wilmington oil field's Long Beach Unit generally has equaled about 6 percent of total field production. A representative Long Beach Unit bid package that we reviewed required that potential purchasers bid a per-barrel bonus relative to a base price equal to the highest price posted in

the Wilmington and three other named fields.[1] As table 3.1 shows, the city's sell-off program consistently has generated bonuses above posted prices. According to the Chief Counsel of the California State Lands Commission, such bonuses indicate that posted prices are not reflective of fair market value.

The major oil company officials (generally managers responsible for West Coast crude oil supplies) that we contacted expressed a contrary view. For example, officials at one of the three companies we visited in California told us that the volume of sell-off oil is too small relative to total field production to conclude anything about posted prices. Officials at another company said the sell-off pricing terms in the Long Beach Unit Contractors' Agreement give the city a "win-win" situation. That is, if the city decides not to conduct a sell-off program for a particular period, such as when it considers posted prices to be

Table 3.1: Results of the City of Long Beach's Sell-Off Program[a]

			Barrels of oil		
Calendar year[b]	Range of winning bonuses per barrel	Weighted average bonus per barrel	Sell-off oil (contract volume)	Field production during sell-off contract period	Sell-off oil as a percent of field production
1971	$0.16–0.21	$0.17	13,230,900	202,603,119	6.5%
1981	0.22–0.35	0.27	1,337,700	23,138,750	5.8
1982	0.15–0.43	0.29	3,218,400	58,143,708	5.5
1983	0.90–0.99	0.96	3,645,000	60,259,507	6.0
1985	1.88–2.21	2.06	4,050,000	57,111,014	7.1

[a]The results shown are based on production from Tract One in the Wilmington oil field's Long Beach Unit. This tract accounted for 80 percent of the city's total volume of sell-off oil during the periods shown.

[b]The city awarded numerous contracts with effective dates beginning in these years. Most of the contracts covered 18-month periods. For ease of presentation, we aggregated contract data (bonus amounts and sell-off volumes) by the calendar year in which the contract became effective. Similarly, we prorated and/or summed field production data as necessary to provide for comparability with the contract period volumes. The program data provided us disclosed no contracts that went into effect during 1972 through 1980 or 1984.

Source: Developed from (1) bonus information and sell-off oil contract volumes provided by the City of Long Beach's Department of Oil Properties and the California State Lands Commission and (2) Wilmington field production data published by the Conservation Committee of California Oil Producers.

[1]Although used generally by sell-off program managers to describe any bid amounts, the term "bonus" is somewhat of a misnomer. That is, the term does not imply that a bid amount is always above the applicable base price. The winning bonuses presented in tables 3.1 and 3.2 are all higher than the base prices; however, some of the winning bonuses presented in table 3.3 are below base prices.

advantageous, the agreement obligates the field contractor to take the oil and pay the city for it on the basis of posted prices.[2]

Representatives of the American Independent Refiners Association, West Coast Division, offered an additional perspective. They told us that because major oil companies own up to 75 percent of the oil reserves in California and control another 10 to 15 percent through long-term purchase agreements or other arrangements, sell-off oil is a valuable supply source for independents and is likely to command bonus prices. Our analysis of sell-off program results for the periods shown in table 3.1 revealed that independents purchased all of the oil.

Results of the California State Lands Commission's Sell-Off Program

All state-owned lands in California leased for oil production are in coastal areas, specifically in the tidelands extending 3 miles from the shoreline. Except for the Wilmington oil field discussed earlier, the California State Lands Commission is responsible for managing these leases and a sell-off program for the state's royalty share of the oil produced. While the state has a total of about 95 leases involving 24 coastal areas, the majority of the oil in the state's sell-off program historically has been produced from two fields, Huntington Beach and South Elwood.

Table 3.2 shows that for 1981 (the year federal price controls on crude oil ended) and 1982 through 1985, the volume of sell-off oil from Huntington Beach and South Elwood ranged from 10 to 23 percent of the two fields' total production. The percentage fell to less than 9 percent in 1986, a year in which oil prices dropped. The Chief Counsel of the California State Lands Commission told us that:

- The state's leases allow the state an option as to the types of royalty it receives. The state can take its royalty as a share of the oil produced (royalty in kind) and subsequently auction the oil in a sell-off program. Alternatively, the state can choose to receive its royalty as a monetary payment (royalty in value) based on posted prices.
- This provision in the leases helps the state to maximize revenues by taking royalty in kind when market prices are high and royalty in value when prices are low.

[2]We confirmed this observation by reading the Contractors' Agreement and discussing the applicable sell-off provisions with the Director, Department of Oil Properties, City of Long Beach

Table 3.2: Results of the California State Lands Commission's Sell-Off Program[a]

Calendar year[b]	Range of winning bonuses per barrel[c]	Weighted average bonus per barrel	Barrels of oil: Sell-off oil (contract volume)	Barrels of oil: Field production during sell-off contract period	Sell-off oil as a percent of field production
1973	•	$0.77	374,760	70,299,206	0.5%
1974	$1.12–1.27	1.19	1,573,334	83,164,762	1.9
1980	0.32–3.56	1.42	1,068,638	12,187,358	8.8
1981	1.42–1.59	1.52	1,121,304	10,972,882	10.2
1982	0.05–0.15	0.10	1,898,496	15,142,350	12.5
1983	0.69–2.25	1.50	3,319,320	16,834,722	19.7
1984	2.16–2.57	2.29	2,987,496	17,088,623	17.5
1985	0.67–0.80	0.73	1,520,910	6,490,711	23.4
1986	•	0.73	324,000	3,696,611	8.8

[a]The results shown are based on sales from the Huntington Beach and South Elwood oil fields, which accounted for 83 percent of the state's total volume of sell-off oil for the periods shown.

[b]For these years, the state awarded numerous contracts, with periods of coverage ranging from 6 to 81 months. For ease of presentation, we aggregated contract data (bonus amounts and sell-off volumes) by the calendar year in which the contract became effective. Similarly, we prorated and/or summed field production data as necessary to provide for comparability with contract period volumes. Program data provided us disclosed no contracts that went into effect during 1975 through 1979.

[c]No bonus range is shown for calendar years 1973 and 1986 because only one sell-off program contract became effective in each year.

Source: Developed from (1) bonus information and sell-off oil contract volumes provided by the California State Lands Commission and (2) Huntington Beach and South Elwood oil fields production data published by the Conservation Committee of California Oil Producers.

As table 3.2 shows, the state's sell-off program consistently has generated positive bonuses above posted prices. Thus, the Commission's Chief Counsel told us that posted prices are not reflective of fair market value. Our analysis of the sell-off program results for the periods shown in table 3.2 revealed that independent refiners purchased all the oil. As noted earlier in regard to table 3.1, West Coast independent refiners said sell-off oil is a valuable supply source for independents and is likely to command bonus prices.

Results of DOE's Sell-Off Program at the Elk Hills Naval Petroleum Reserve

Elk Hills is one of the largest producing oil fields in the United States. As table 3.3 shows, DOE has sold significant volumes of this production on the open market through a competitive bidding procedure. For the contract periods shown, potential buyers bid bonuses below or above a base price that DOE calculated by averaging the three highest postings for crude oils of similar quality from fields in the vicinity of Elk Hills. Beginning with the highest bid, DOE awarded contracts to bidders until

all available oil was sold. Thus, for example, winning bonuses for the contract period February 1979 through January 1980 ranged from $0.40 per barrel below the base price to as much as $1.01 a barrel above the base price.

Table 3.3: Results of the U.S. Department of Energy's Sell-Off Program at the Elk Hills Naval Petroleum Reserve

Contract period	Range of winning bonuses per barrel	Weighted average bonus per barrel	Barrels of oil per day[a]		Sell-off oil as percent of fi producti
			Sell-off oil (contract volume)	Field production	
02/79-01/80	$(0.40)– 1.01	$0.10	127,151	150,651	8
02/80-07/80	0.68–11.12	5.27	127,465	160,695	79
08/80-11/80	2.37– 5.32	4.14	123,445	160,695	7
12/80-11/81[b]	1.90– 5.67	4.15	34,000	173,064	1
11/81-04/82	(0.35)– 2.69	1.29	87,960	163,616	53.8
05/82-09/83	All crude oil was sold to the Department of Defense.				
10/83-03/84	1.68– 2.26	2.00	92,200	152,135	6
04/84-09/84	1.68– 2.26	2.00	87,625	135,318	64.8
10/84-03/85	0.85– 1.37	1.08	92,184	135,318	6
04/85-09/85	(0.95)– 0.29	(0.20)	85,214	128,003	6
10/85-03/86	(1.16)– (0.20)	(0.46)	85,991	128,003	67.2
04/86-09/86	(6.98)– (0.97)	(4.49)	81,920	103,503	7

[a]To permit comparing sell-off oil volumes with total field production, we used barrels-of-oil-per-day data. For example, for the period November 1981 through April 1982, sell-off contracts provided for sale of 87,960 barrels of oil per day. In comparison, field production averaged 163,616 barrels per day during calendar year 1982 (the year most representative of the contract period).

[b]The last month of this contract period overlapped the first month of the next period.

Source: Developed from (1) bonus information and sell-off oil contract volumes shown in annual reports of operations (fiscal years 1980 through 1986) and unpublished data provided by DOE's Office of Naval Petroleum and Oil Shale Reserves and (2) Elk Hills field production data published by the Conservation Committee of California Oil Producers.

Except for the three most recent periods presented in the table, the weighted average bonuses show that the sell-off program generally has generated bonuses above posted prices. One possible reason for the bonuses above posted prices is that the principal purchasers of the oil are independent refiners—purchasers with limited sources of crude oil supply compared to the major oil companies. Representatives of the American Independent Refiners Association, West Coast Division, told us that the Elk Hills Naval Petroleum Reserve is the single most important source of crude oil for small and independent refiners in California

As noted in our recent report,[3] small and independent refiners purchased about 53 percent of the crude oil sold by the government at Elk Hills during November 1981 through March 1987, and, at times during this period, purchases were as high as 82 percent. Further, American Independent Refiners Association representatives estimated that, during this period, small and independent refiners acquired as much as 25 percent more of the available Elk Hills crude oil production through purchases from resellers or exchanges with other refiners.

The weighted average bonuses below posted prices for the recent periods presented in table 3.3 resulted from a disparity between posted prices and spot market prices.[4] That is, as explained in another of our earlier reports,[5] unprecedented discounts were bid as oil prices in the spot market declined, while posted prices remained fairly stable. Subsequently, for the contract period beginning October 1986, DOE revised its sales procedures to require bidders to submit a specific price for the oil rather than a bonus or discount to a base price. The highest bidders pay that price, adjusted monthly on the basis of changes in spot market quotes for two crude oils sold on the California spot market.

[3]Naval Petroleum Reserve - 1, Government and Industry Comments on Selling the Reserve (GAO/RCED-88-43FS, Nov. 1987).

[4]Generally, most oil transactions involve long-term contractual arrangements based on posted prices; however, the spot market involves oil resellers or brokers who supply oil on a onetime basis. Spot market sales occur, for example, when a buyer's normal supply has been interrupted or the buyer needs extra barrels for special purposes. Depending upon market conditions, spot prices may be above or below posted prices.

[5]Naval Petroleum Reserves: Oil Sales Procedures and Prices at Elk Hills, April Through December 1986 (GAO-RCED-87-75FS, Jan. 1987).

Refined Product Prices and Crude Oil Posted Prices

We made various analyses comparing California with the rest of the United States in terms of refined petroleum product prices and crude oil posted prices. Composite pricing data we developed indicated that refined petroleum product prices in California were generally in line with prices in the rest of the country but that crude oil posted prices in California appeared lower than elsewhere. A more specific analysis of two similar-quality crude oils (West Texas Sour and California Ventura) showed that posted prices for the California oil were about 12 percent lower than posted prices for the Texas oil. A criticism of this analysis is that these two oils are not traded in the same markets and do not compete with one another. For this reason, we compared two similar-quality oils (Alaskan North Slope and California Ventura) used by West Coast refineries. Our analysis showed that prices for Ventura oil delivered to Los Angeles area refineries were about 7 percent lower than such delivered prices for the Alaskan oil. We discuss the various reasons for this difference in the following sections.

Comparison of Refined Petroleum Product Prices in the U.S. (Excluding PADD V) and PADD V During 1950 Through 1985

Table 4.1 shows that product prices in PADD V[1] and the rest of the United States were very similar during calendar years 1950 through 1985. The prices shown are the annual average wholesale prices of four principal refined products—motor gasoline, kerosene, distillate fuel, and residual fuel. The data source, Platt's, reported average product prices for two geographical areas—the "entire U.S." and the "U.S. east of California" (which company officials told us means the United States excluding PADD V). We calculated average prices for PADD V by subtracting the reported prices for these two areas and using the relative percentage weights assigned to various geographic areas and to each of the four refined product categories by Platt's. Also, by using EIA statistics for 1985, we calculated that California accounted for about 57 percent of refined petroleum product sales in PADD V during that year.

[1] As noted earlier, the Petroleum Administration for Defense District V includes the states of Alaska, Arizona, California, Hawaii, Nevada, Oregon, and Washington. California accounted for over one-half of the sales of refined petroleum products in the district in 1985.

Table 4.2: Comparison of Average Posted Prices for Crude Oil in the U.S. Excluding PADD V and California During 1950 Through 1985

Calendar year	Average price in dollars per barrel: U.S. (excluding PADD V)	California	Difference	Difference as a percentage of U.S. prices
1950	$2.58	$2.16	$0.42	16.28%
1955	2.81	2.50	0.31	11.03
1960	2.93	2.46	0.47	16.04
1965	2.92	2.38	0.54	18.49
1970	3.26	2.54	0.72	22.09
1975	7.93	6.03	1.90	23.96
1976	8.52	6.15	2.37	27.82
1977	8.93	7.31	1.62	18.14
1978	9.80	7.22	2.58	26.33
1979	13.20	12.60	0.60	4.55
1980	22.67	22.72	(0.05)	(0.22)
1981	34.92	26.80	8.12	23.25
1982	31.72	24.58	7.14	22.51
1983	29.34	22.61	6.73	22.94
1984	28.95	22.09	6.86	23.70
1985	26.63	22.13	4.50	16.90

Source: Oil prices for the U.S. (excluding PADD V) are from Platt's Oil Price Handbook and Oilmanac - 1985, McGraw-Hill Publications Company. Oil prices for California are from American Petroleum Institute, Basic Petroleum Data Book, Vol. VII, No. 2, May 1987.

For the years shown, the difference between crude oil prices in the United States (excluding PADD V) and California averaged 18.36 percent. However, caution has to be used in interpreting such price differentials. The data presented here, for example, are aggregate figures and do not consider variances in oil quality, an important factor in establishing posted prices. Recognizing this, table 4.3 compares prices for two crude oils of similar quality.

Comparison of Posted Prices for West Texas Sour Oil and California Ventura Oil During 1980 Through 1985

Table 4.3 compares posted prices for West Texas Sour oil and California Ventura oil. As stated earlier, these are similar quality oils that we selected with the assistance of the Project Manager for Reservoir Data and Analysis at DOE's Bartlesville Project Office. For the 6-year period shown, the posted prices for Ventura oil were, on average, 12.7 percent lower than posted prices for the Texas oil.

Generally, the independent refiners and the crude oil supply managers at the major oil companies that we contacted told us that this type of analysis was not very meaningful because the oil industry in California

Comparison of Average Posted Prices for Crude Oil in the U.S. (Excluding PADD V) and California During 1950 Through 1985

In contrast to table 4.1, which shows that refined petroleum product prices in California and the rest of the United States have been comparable, table 4.2 shows that California crude oil prices have been consistently lower than prices in the rest of the U.S. California prices were higher than other U.S. (excluding PADD V) prices only in 1980. During that year, heavy oil, which is predominant in California, was fully freed from federal price controls. In 1981, President Reagan freed all other categories of domestically produced crude oil from federal price controls.

Table 4.1: Comparison of Refined Petroleum Product Prices in the U.S. Excluding PADD V and PADD V During 1950 Through 1985

	Average price in dollars per barrel			Difference as a percentage of U.S. prices
Calendar year	U.S. (excluding PADD V)	PADD V	Difference	
1950	$3.45	$3.60	$(0.15)	(4.3
1955	3.76	4.01	(0.25)	(6.6
1960	3.84	3.84	0.00	0.00
1965	3.81	3.91	(0.10)	(2.62
1970	4.33	4.08	0.25	5.7
1975	11.47	10.87	0.60	5.2
1976	12.42	12.37	0.05	0.40
1977	13.95	13.95	0.00	0.0
1978	14.17	14.12	0.05	0.3
1979	20.52	21.87	(1.35)	(6.58)
1980	30.48	30.88	(0.40)	(1.31
1981	37.49	36.44	1.05	2.8
1982	34.95	35.05	(0.10)	(0.29)
1983	32.42	31.92	0.50	1.54
1984	31.29	31.29	0.00	0.0
1985	30.44	31.69	(1.25)	(4.11)

Source: Platt's Oil Price Handbook and Oilmanac - 1985, McGraw-Hill Publications Company.

is somewhat of an economic island with very little movement of either crude oil or refined products between California and states east of the Rockies. Thus, according to these industry officials, the validity of comparing California's prices with those in other parts of the United States is questionable.

On the other hand, other industry contacts, such as independent producers in California, said that "oil is oil" and that posted prices for California oil could be compared with posted prices elsewhere by making appropriate adjustments for any differences in the quality of the two oils and the costs of transporting them to refineries. During our review, we noted that this type of comparison was used by consultants for the City of Long Beach and the State of California in the Long Beach cases discussed in chapter 1. Similarly, the authors of the EIA article discussed in chapter 2 compared posted prices for selected California and Texas oils.

In any event, analysts in IRS' Petroleum Industry Program told us that a more appropriate methodology may be to compare two oils that compete in the same refinery areas. The analysts noted, for instance, that no West Texas Sour oil is delivered to California refineries.

Table 4.3: Comparison of Posted Prices for West Texas Sour Oil and California Ventura Oil During 1980 Through 1985

	Posted prices in dollars per barrel[a]			Difference as a percentage of
Calendar year[b]	West Texas Sour	California Ventura	Difference	West Texas Sour
1980	$14.11	$13.47	$0.64	4.54
1981	36.03	27.44	8.59	23.84
1982	30.42	27.09	3.33	10.95
1983	28.38	24.86	3.52	12.40
1984	27.41	24.64	2.77	10.11
1985	25.65	23.89	1.76	6.86
6-year average	$27.00	$23.56	$3.44	12.74

[a]The prices shown are for oil with a gravity range of 30 degrees through 30.9 degrees API

Source: Prices for West Texas Sour oil are from DeGolyer & MacNaughton, Twentieth Century Petroleum Statistics (42nd edition), Nov. 1986. Prices for California Ventura oil are from annual issues of Platt's Oil Price Handbook and Oilmanac, McGraw-Hill Publications Company.

[b]The time series presented here is more limited than in tables 4.1 and 4.2 because one of the source documents, Platt's, reported posted prices for Ventura oil only for 1979 and following years. The table begins with 1980 because the federal windfall profit tax was enacted in 1980.

Comparison of Delivered Prices (at Los Angeles Refineries) for Alaskan North Slope Oil and California Ventura Oil During 1980 Through 1985

Table 4.4 compares the prices of two similar-quality oils delivered to the same refinery area. The industry officials we contacted said that Los Angeles area facilities do refine both of these oils. The data show that the delivered prices for the two oils differed, on average, about 7 percent over the 6-year period.

According to analysts in IRS' Petroleum Industry Program, determining reasons for this difference is difficult because the two oils' production volumes are vastly disproportionate. In calendar year 1985, for example, Alaskan North Slope oil production averaged over 1.5 million barrels per day, compared to 20,873 barrels per day for California Ventura oil. The analysts also told us that while Ventura is a good quality oil (a light oil) with a gravity of about 28 degrees API, it is not representative of California crudes, most of which are heavy (about 20 degrees API or less). Given these caveats, the IRS analysts said that comparing Alaskan North Slope oil and California Ventura oil was a reasonable approach because alternative comparisons are not available. The analysts explained that oils produced in states other than Alaska are not refined in California; thus, the California oil market presents methodological limitations in terms of comparing similar-quality oils competing in the same market area.

Table 4.4: Comparison of Delivered Prices at Los Angeles Refineries for Alaskan North Slope Oil and California Ventura Oil During 1980 Through 1985

	Delivered prices in dollars per barrel[a]			Difference as a percentage of
Calendar year	Alaskan North Slope[b]	California Ventura[c]	Difference	Alaskan Nort Slop
1980	$30.13	$27.80	$2.33	7.73%
1981	32.40	28.76	3.64	11.2
1982	29.03	27.04	1.99	6.8
1983	26.96	24.82	2.14	7.94
1984	26.02	24.62	1.40	5.3
1985	24.54	24.08	0.46	1.8
6-year average	$28.18	$26.19	$1.99	7.0

[a]The prices shown are for Alaskan North Slope oil at 27 degrees API gravity and California Ventura oil at 28 degrees API gravity.

[b]Analysts in IRS' Petroleum Industry Program estimated these average annual prices by using aggregate statistical data for Alaskan North Slope crude oil delivered to the West Coast at Los Angeles. These data include wellhead prices at Pump Station No. 1 on the Trans-Alaska Pipeline System; applicable tariffs for pipeline transportation from Pump Station No. 1 to the port of Valdez, Alaska; and estimated waterborne transportation costs for shipping the oil from Valdez to Los Angeles.

[c]To calculate prices for California Ventura oil delivered to Los Angeles, we started with posted prices published in annual issues of Platt's Oil Price Handbook and Oilmanac. To the posted prices we added $0.35 per barrel, which is the estimated cost of pipeline transportation from the Ventura oil field to Los Angeles, according to analysts in IRS' Petroleum Industry Program.

We identified two possible explanations for the price differences shown in table 4.4. The first reason involves the large volume of heavy oil produced in California. Generally, the independent refiners and the crude oil supply managers at the major oil companies that we contacted told u that heavy crude oils require more volume of input and more sophisticated (and expensive) refinery equipment to yield the same slate of refined products as light crudes; consequently, a refiner will post lower prices for heavy crude oils to compensate for the higher operating and capital costs. In this regard, the IRS consultant's (Arthur D. Little, Inc.) study, discussed earlier, concluded that low posted prices for heavy crude oils, the predominant type of crude oil in California, tended to drag down the posted prices for all other (lighter or better quality) California oils, such as Ventura.

The second explanation for the price differences shown in table 4.4 involves the large volumes of Alaskan North Slope oil refined in California. During our review, we identified one analytical report that attributed California's "seeming price anomalies" to the federal ban on exporting Alaskan North Slope oil. The report noted that "Fundamentally, all West Coast crude oils are discounted relative to world-market values . . . [because] the export ban makes such discounts inevitable."[2] We note, however, that the California oil posted price controversy existed before 1977, the year that production of Alaskan North Slope oi began. As mentioned earlier, for example, the Long Beach I lawsuit was initiated in 1975.

[2]Institute of Social and Economic Research (University of Alaska, Anchorage), Report on Alaska Benefits and Costs of Exporting North Slope Crude Oil (for the Alaska State Senate Finance Committee), (May 1987), A-22

Oil Pipeline Regulation in California

The California State Lands Commission has said that the availability of common carrier pipeline transportation (open access to pipelines) for crude oil buyers and sellers in California would lead to a more competitive market for crude oil. Further, the Commission contends that a more competitive crude oil market should enhance the prospect for higher crude oil posted prices. Pipelines represent the lowest cost means of transporting crude oil. In California, most crude oil pipelines are owned by major oil companies which have elected to operate as private carriers. However, companies with intrastate pipelines crossing federal land have some common carrier obligations. Our review did not find any enforceable complaints regarding violations of these common carrier obligations.

Holders of Federal Right-Of-Way Permits Have Some Common Carrier Obligations

The regulatory status of crude oil pipelines in California is somewhat unique. Under California law, intrastate oil pipeline companies have option to operate as private carriers or as "public utility corporation" (the state's statutory term for common carriers) regulated by the California Public Utilities Commission. Except for the Four Corners Pipe Line Company, all intrastate pipelines operating in California are private carriers.

Before a pipeline may cross federal land in any state, the pipeline company first must obtain a right-of-way permit from the federal agency having land management jurisdiction, which is usually the U.S. Department of the Interior's Bureau of Land Management. Under provisions of the Mineral Leasing Act, 30 U.S.C. 185(r), issuance of a right-of-way permit obligates the company to construct, operate, and maintain the pipeline as a common carrier. However, the Department of the Interior maintains that the common carrier obligations of a "permitted" company are not very extensive in that the company does not have to publish tariff rates or provide pipeline space on a prorated basis to all customers who tender oil for transport. For example, in a May 13, 19[illegible] memorandum to the Director, Bureau of Land Management, the Department of the Interior's Office of the Solicitor interpreted applicable law as follows:

"The leading case regarding the Secretary's [Department of the Interior] common carrier authority under . . . [the Act] is Chapman v. El Paso Natural Gas Co., 204 2d 46 (D.C. Cir. 1953). That case dealt with an attempt by the Secretary to include in a pipeline right-of-way grant a stipulation that imposed detailed requirements for operation of the pipeline as a common carrier. Under the stipulation, the pipeline operator was required . . . to obtain the Secretary's approval of its rates and to comply with requirements dealing with pipeline capacity and service The Court o[illegible]

Appeals held that . . . [the Act] gives the Secretary authority to provide regulations and conditions as to survey, location, application, and use, but only as to the physical aspects of the right-of-way and not to the operation of the pipeline."

Outstanding Federal Right-Of-Way Permits and Pipeline Miles Crossing Federal Lands in California

Table 5.1 shows a total of 51 right-of-way permits outstanding in California. The total length of those portions of crude oil pipelines crossing federal lands is 63.9 miles.

Table 5.1: Number of Federal Right-Of-Way Permits Outstanding and Number of Pipeline Miles Crossing Federal Lands in California

Permit holder	Number of permits	Pipeline statute miles crossing federal lands[a]	Pipeline statute miles in the state[b]	Federal miles as a percentage of state totals
Chevron	12	4.5	915	0.5
Mobil	6	25.5	390	6.5
Shell	4	6.1	481	1.3
Texaco	5	1.9	446	0.4
Union	5	4.3	894	0.5
Subtotal	**32**	**42.3**	**3,126**	**1.4**
All others	19	21.6	1,796	
Total	**51**	**63.9**	**4,922**	**1.3**

[a]The miles shown are for intrastate crude oil pipelines only.

[b]The miles shown are for intrastate crude oil and petroleum products pipelines. The source agency, the California State Fire Marshall's Office, did not have separate data for only crude oil pipelines or for petroleum products pipelines.

[c]The figure is an average, not a subtotal or total.

Source: We extracted the number of permits and the number of pipeline statute miles crossing federal lands from permit case files (as of July 1987) at BLM's district office in Bakersfield, California. The California State Fire Marshall's Office provided us the number of pipeline statute miles in the state.

Five companies account for 32, or 63 percent, of the 51 permits and 42.3, or 66 percent, of the 63.9 statute miles. The table also shows that the total miles (63.9) of those portions of intrastate crude oil pipelines crossing federal lands represent only about 1.3 percent of the total lengths (4,922 statute miles) of crude oil and petroleum products pipelines in the state.

BLM's Enforcement Responsibilities for Right-Of-Way Permits Not Tested

Some California officials, including the Chief Counsel of the State Lands Commission, have long asserted that crude oil posted prices in the state are artificially low because the intrastate pipeline system is privately owned and unregulated by the California Public Utilities Commission. Further, in July 1984, representatives of the California State Lands Commission visited BLM's state office in Sacramento and alleged that intrastate oil pipelines with federal right-of-way permits in California were not acting as common carriers. During our review, BLM state office officials responsible for federal right-of-way permits told us that the State Lands Commission representatives had made allegations only and had not presented any evidence, such as specific facts and dates of violations or names of offending individuals and pipelines.

Nevertheless, BLM officials did initiate an investigation of the situation. For example, the BLM State Director contacted the manager of BLM's district office in Bakersfield—the office that administers the majority of the federal right-of-way permits issued in California—and inquired whether district office staff had ever received or were aware of any complaints from oil and gas lessees or operators of discrimination in access to any pipeline company holding a federal right-of-way permit. The District Manager responded that the district office had not received any complaints of pipeline access discrimination.

Similarly, during our review, BLM program managers at the national office in Washington, D.C., the state office in Sacramento, and the district office in Bakersfield told us that they had never received nor were they aware of any complaints regarding pipeline access discrimination. At the Bakersfield district office, we examined the agency's case files pertaining to intrastate crude oil pipelines holding federal right-of-way permits. None of the files revealed any evidence of complaints.

Major and Independent Oil Companies Generally Have Worked Cooperatively to Transport Oil

Members of the American Independent Refiners Association, West Coast Division, told us that the major proprietary pipelines in California are operating now at full capacity and, as such, regulation of these lines would not increase the volume of oil transported even if regulation changed the ownership mix of the oil transported. They also commented that the major oil companies generally have accommodated the independents' transportation needs, although a price has to be paid and arrangements are not as desirable as common carrier service. They concluded that pipeline practices in California have not been formally challenged for a number of reasons, one being that no independent can afford to challenge the majors.